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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DALE GILMAN, PAUL ALDIGHIERI, LEANN KRIDNER, RYAN SKAFF, VILAY PATEL, and STEPHEN JAY ORRIS[1]

Appeal 2015-006170
Application 13/177,172
Technology Center 2600

Before MICHAEL J. STRAUSS, DANIEL N. FISHMAN, and JAMES W. DEJMEK, *Administrative Patent Judges*.

DEJMEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–5, 9, 14, and 18. Claims 6–8, 10–13, 15–17, 19, and 20. App. Br. App'x. 1–3. We have jurisdiction over the remaining pending claims under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellants identify Ford Global Technologies, LLC as the real party in interest. App. Br. 2.

STATEMENT OF THE CASE

Introduction

Appellants' claimed invention is directed to determining a range limit for an electric/battery-powered vehicle based on the vehicle's energy source status. Abstract. In a disclosed embodiment, a travel distance from the current location of the vehicle to a predetermined primary charging location may be determined. Spec. ¶¶ 5–6. In other disclosed embodiments, the calculation of a range limit may account for the current direction the vehicle is heading or may find an alternate charging station when the primary charging station is located beyond the current range limit of the vehicle. Spec. ¶¶ 10, 55.

Claim 1 is representative of the subject matter on appeal and is reproduced below with the disputed limitations emphasized in *italics*:

1. A system comprising:

a processor configured to:

receive a vehicle distance-to-empty;

calculate a distance from a current vehicle location *a predefined primary recharging location*;

calculate a range limit, representing a remaining range, for a vehicle traveling on a current heading, beyond which return to the primary recharging location is estimated by the processor to be no longer possible; and

when the range limit has been exceeded, automatically find a new, secondary recharging point within the distance-to-empty.

The Examiner's Rejections

1. Claims 1 and 3–5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Todoriki et al. (US 6,864,807 B2; Mar. 8, 2005)

("Todoriki") and Saga et al. (US 5,815,824; Sept. 29, 1998) ("Saga"). Final Act. 3–5.

2. Claims 1, 2, 9, 14, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahira et al. (US 5,539,399; July 23, 1996) ("Takahira") and Saga. Final Act. 5–9.

Issues on Appeal

1. Did the Examiner err in finding the combination of Todoriki and Saga teaches or suggests a processor configured to "calculate a range limit, representing a remaining range, for a vehicle traveling on a current heading, beyond which return to the primary recharging location is estimated by the processor to be no longer possible," as recited in claim 1?

2. Did the Examiner err in finding the combination of Todoriki and Saga teaches or suggests a "predefined primary recharging location," as recited in claim 1?

3. Did the Examiner err in finding the combination of Takahira and Saga teaches or suggests a processor configured to "calculate a range limit, representing a remaining range, for a vehicle traveling on a current heading, beyond which return to the primary recharging location is estimated by the processor to be no longer possible," as recited in claim 1?

ANALYSIS[2]

Rejection over Todoriki and Saga

Appellants contend the Examiner erred in finding Todoriki teaches calculating a range limit as claimed. App. Br. 6–8; Reply Br. 1–2. In particular, Appellants assert Todoriki merely teaches a binary calculation of whether a destination can be reached. App. Br. 6 (citing Todoriki, col. 5, ll. 12–16). However, Appellants argue, the claimed range limit is not simply the maximum range of the vehicle, but rather "the range of the vehicle beyond which return to the primary charging station cannot be achieved." App. Br. 6.

Similarly, Appellants assert the Examiner erred in finding Saga also teaches calculating the claimed range limit. App. Br. 7–8; Reply Br. 3. Appellants assert Saga's reachability determination means merely provides a binary calculation of whether the vehicle can reach a destination. App. Br. 7 (citing Saga, col. 12, ll. 10–29).

To distinguish the claimed range limit from a maximum range, Appellants provide hypothetical examples to illustrate how Appellants interpret the range limit is calculated. App. Br. 6–7; Reply Br. 2–5. Appellants argue "[n]one of the prior art teaches calculating a range limit beyond which return to a charging point is no longer possible." Reply Br. 5 (emphases omitted). Appellants argue a distinction between the claimed range limit and the calculations described in Todoriki and Saga is that the

[2] Throughout this Decision, we have considered the Appeal Brief, filed January 27, 2015 ("App. Br."); the Reply Brief, filed June 4, 2015 ("Reply Br."); the Examiner's Answer, mailed on April 7, 2015 ("Ans."); and the Final Office Action ("Final Act."), mailed on July 29, 2014, from which this Appeal is taken.

claimed range limit "will clearly vary based on vehicle heading" as opposed to a determination of whether the charging point is within a travelable distance. App. Br. 7.

As an initial matter, the Examiner notes, the claim language does not preclude the range limit from being a "binary calculation," which Appellants assert is taught by the identified prior art. Ans. 6–7. Although the claims are interpreted in light of the Specification, limitations from the Specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

We agree with the Examiner that neither the claim language nor the Specification restrict the range limit from being a binary calculation.

Nonetheless, the Examiner finds Todoriki and Saga each teach calculating the narrower interpretation of the range limit urged by Appellants. Ans. 6–8; *see also* Final Act. 3–4.

Todoriki teaches a calculated travelable distance (i.e., a maximum, or remaining, range) and a route distance between "the present position and the destination." Todoriki, col. 5, ll. 12–14; *see also* Todoriki, col. 4, ll. 64–67 ("The route and the travel distance of the route are derived from the destination information . . . and the positional information obtained from [the] positional information obtaining section."). By comparing these distances, Todoriki determines "whether or not the vehicle of the present energy condition can reach the destination." Todoriki, col. 5, ll. 14–16. In other words, if the distance between the present position of the vehicle and the destination (e.g., the primary recharging location) is greater than the calculated travelable distance (i.e., the remaining range), returning to (or reaching) the destination is no longer possible.

As the Examiner explains, this calculation may be repeated by Todoriki. Ans. 6. For example, if the vehicle is traveling away from the destination, the remaining range will continue to lower and the distance to return to the destination will become greater. When the distance to the destination is greater than the remaining range, return to the destination is no longer possible. Thus, contrary to Appellants' assertion, Todoriki does take into account the vehicle heading information in determining the travelable distance. Accordingly, we agree with the Examiner that Todoriki teaches the disputed limitation.

Regarding Saga, the Examiner finds, and we agree, the reachability determination means of Saga teaches calculating the narrower interpretation of range limit urged by Appellants. Final Act. 4 (citing Saga, col. 12, ll. 10–29); Ans. 7. "[T]he reachability determination means **34** also determines *during the driving* whether the vehicle can reach the destination *or the planned charging point in response to variations in the remaining driving distance*." Saga, col. 12, ll. 10–14 (emphases added). Thus, Saga teaches a continuous calculation (i.e., during the driving) to determine whether "the situation changes from a reachable situation to an unreachable situation in the course of driving" (i.e., calculating a range limit, representing a remaining range, beyond which return to the primary recharging location is estimated to be no longer possible). *See* Saga, col. 12, ll. 19–21.

Additionally, Appellants contend neither Todoriki nor Saga teaches a "predefined primary recharging location," as recited in claim 1. App. Br. 7; Reply Br. 4. Appellants distinguish the currently chosen charging point destinations of Todoriki and Saga from a charging location defined by the

vehicle user and stored in the vehicle profile. Reply Br. 4 (citing Spec. ¶ 43).

We are unpersuaded by Appellants' arguments because, as the Examiner explains, the Specification does not provide a limiting definition of a predefined primary recharging location. Ans. 7, 11–12. Rather, the Specification provides examples of primary charging points that "may be" defined by the user and stored in the vehicle. *See* Spec. ¶ 43. The Specification further states that location information (i.e., of the primary charging point) may be input by the vehicle using a navigation system. Spec. ¶ 43.

"Without evidence in the patent specification of an express intent to impart a novel meaning to a claim term, the term takes on its ordinary meaning." *Optical Disc Corp. v. Del Mar Avionics*, 208 F.3d 1324, 1334 (Fed. Cir. 2000). To give a term other than the ordinary meaning, the Specification must clearly redefine the term so as to put person skilled in the art on notice that the patent intends to redefine the term. *See Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999).

We find no evidence of an express intent to impart a novel meaning to a "predefined primary recharging location" that would distinguish from the recharging stations of Todoriki and Saga. Given the lack of evidence of an express intent to impart a novel meaning to a "predefined primary recharging location" from Appellants' Specification, the Examiner broadly but reasonably construes a "predefined primary recharging location," consistent with the Specification, to encompass Todoriki and Saga's recharging stations "whose locations are fixed in space and time." Ans. 7. Additionally, we note Saga teaches, in addition to the "planned charging

point" (i.e., the primary predefined recharging location), displaying alternate (i.e., not primary) charging points located along the way to the planned charging point. Saga, col. 12, ll. 10–29. Therefore, we are not persuaded the Examiner erred by finding a predefined primary recharging location is taught or suggested by Todoriki and Saga's recharging stations.

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the Examiner's rejection of claim 1. Additionally, we sustain the Examiner's rejection of claims 3–5, which depend therefrom and were not argued separately. *See* App. Br. 6–8.

Rejection over Takahira and Saga

Appellants advance similar arguments that Takahira, like Todoriki, teaches a maximum range (i.e., running range) and not the claimed range limit beyond which return to a specified point is no longer possible. App. Br. 8–9; Reply Br. 4–5. Appellants also rely on the same arguments regarding the alleged deficiencies of Saga. App. Br. 9.

We are unpersuaded of Examiner error. The Examiner relies on Saga, not Takahira, to teach "the aspects of the system wherein the processor is made to calculate a range limit value, representing a remaining range, for a vehicle traveling on a current heading, beyond which return to the primary recharging location is no longer possible." Final Act. 5–6 (citing Saga, col. 12, ll. 10–29). As discussed *supra*, we do not agree with Appellants' arguments that Saga does not teach or suggest the disputed limitations from claim 1.

Accordingly, we sustain the Examiner's rejection of independent claim 1 and, for similar reasons, the rejection of independent claims 14 and

18, which recite similar limitations and were not argued separately. *See* App. Br. 8–9. Additionally, we sustain the Examiner's rejections of dependent claims 2 and 9, which were not argued separately. *See* App. Br. 9.

DECISION

We affirm the Examiner's decision to reject claims 1–5, 9, 14, and 18.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED